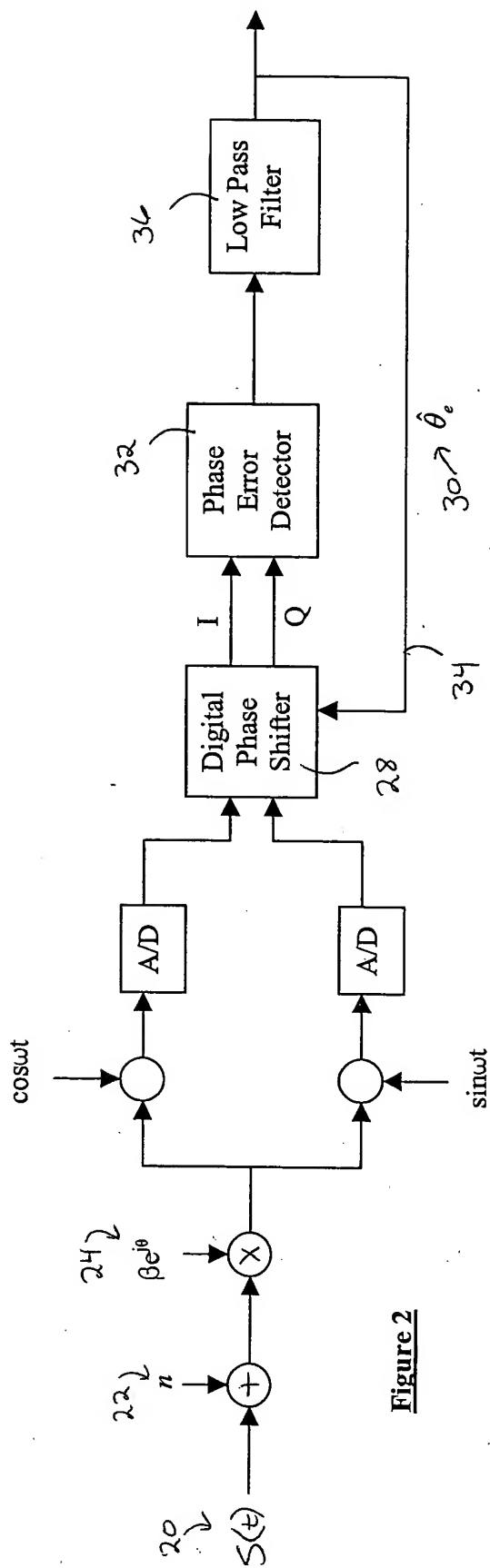
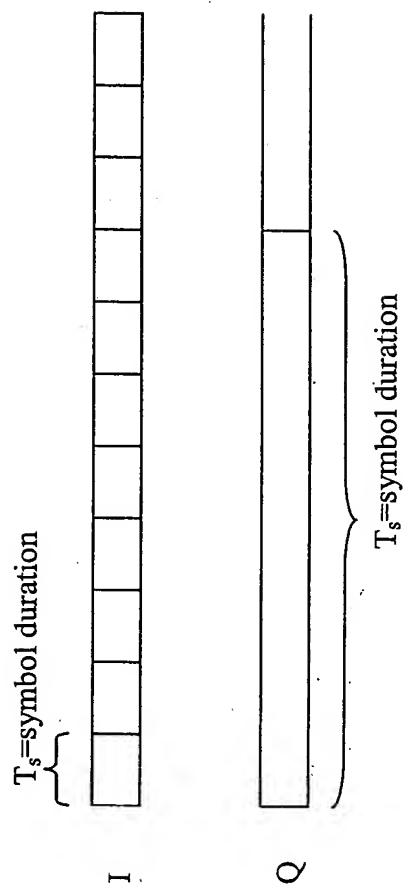


Figure 1: Prior Art



**Figure 2**



**Figure 3**

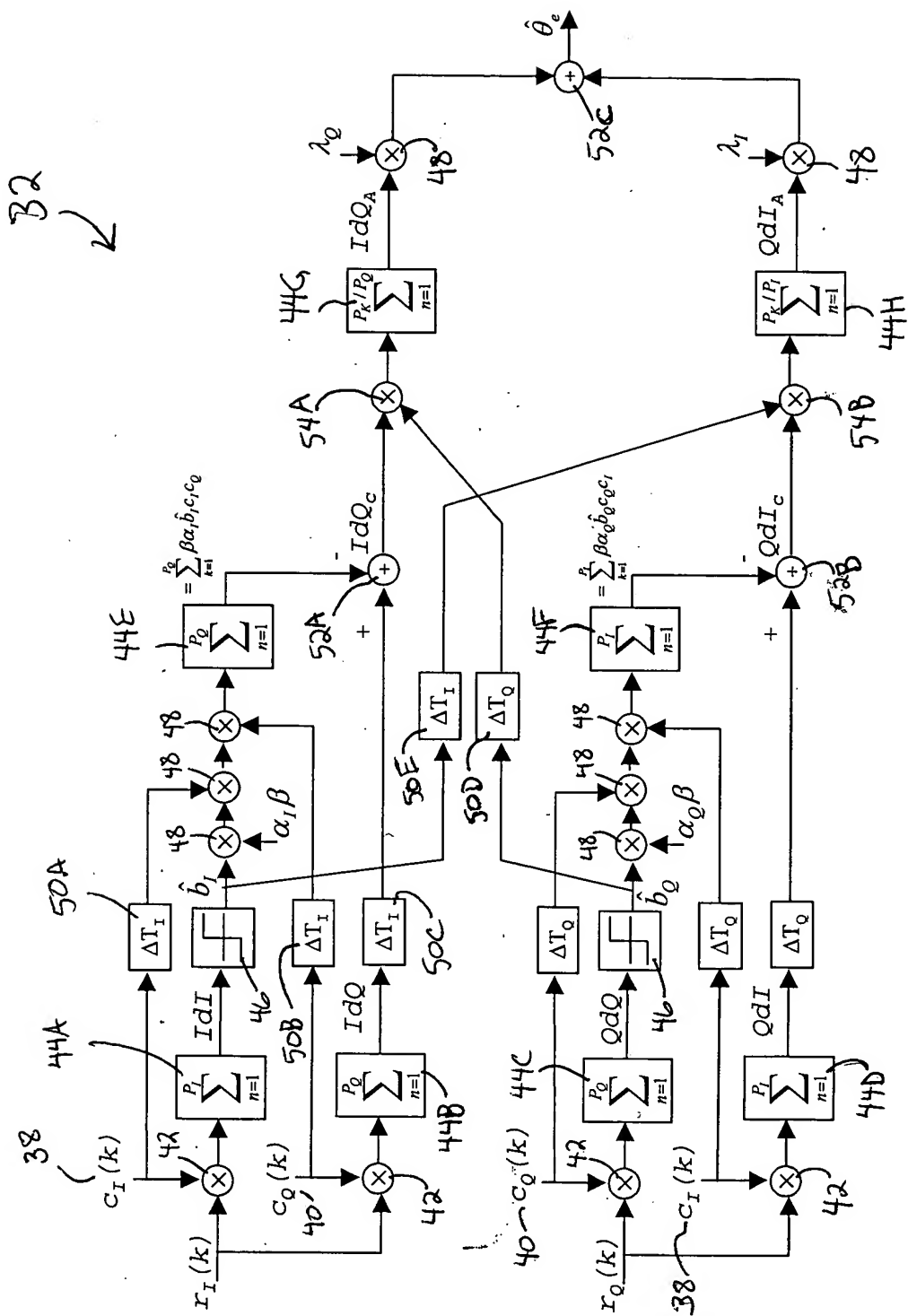
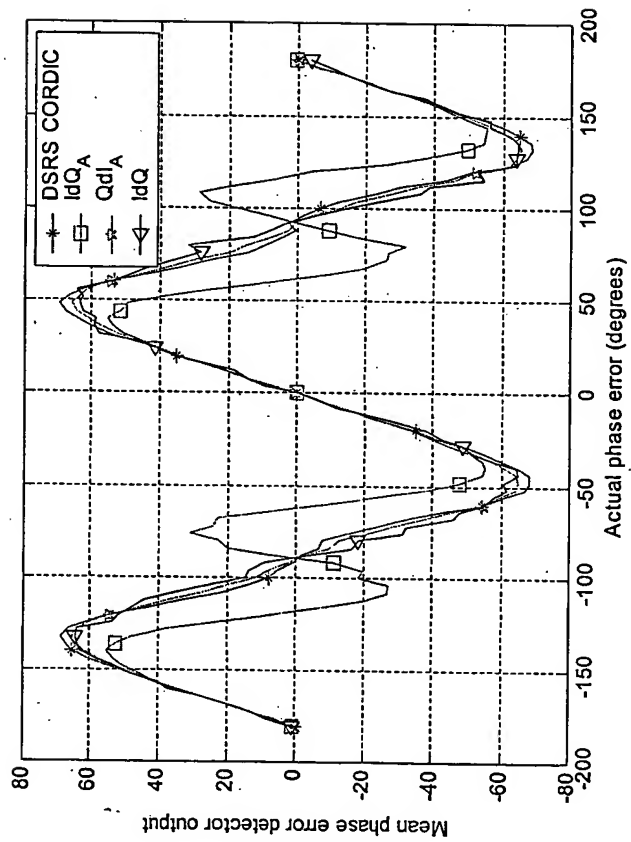


Figure 4



**Figure 5: S-Curves for various phase error detectors.**

Present invention implemented on one channel ( $IdQ_A$  and  $QdI_A$ ),  
 Co-pending invention (DSRs CORDIC), and  
 Prior art method of driving I despread Q to zero.

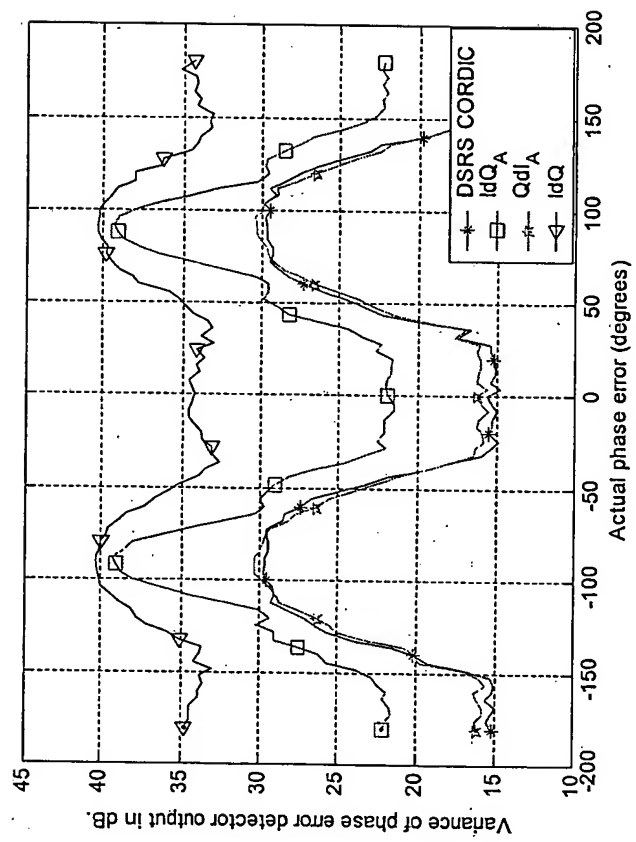


Figure 6: Variance of the phase error detector outputs versus true angle error.